CLAIMS

I claim:

1. A device for wireless transmission and evaluation of signals and switching statuses from at least one mobile device (10) to a second device (11), where at least one of the devices is capable of moving over a predefined travel path, with a transmission link (12) between devices (10) and (11), with a transmission for feeding the energy supply for mobile device(10), with at least one sensor device(9), connected to mobile device (10), which brings about modulation on transmission link (12) between the two devices in accordance with a random signal string of the sensor, with a receiving device for modulation in device (11), wherein a transmission device for transmission across transmission line (12) comprises at least two coupled coil devices (13, 14), which are mechanically and topologically independent of each other.

2. A device in accordance with claim 1, in which the travel path of the mobile devices is of two or three-dimensional form.

3. A device in accordance with claim 1, in which the transmission link (12) is realized by means of a short-range transmission link formed by two coupled, mutually tuned resonant circuits.

4. A device in accordance with claim 1, in which, based on the mechanical independence of the coil devices (13, 14), the transmission device is designed for transmission on a closed, particularly circular, travel path.

5. A device in accordance with claim 1, in which at least one coil device (13, 14)is constructed by plugging together individual, modular coil elements (2), in order to realize links of any length.

6. A device in accordance with claim 1, in which each modular coil element (2) is provided with a contacting device (4) and that coil elements (2) and the contacting device (4) are integrated in a mechanically fixable coil housing.

7. A device in accordance with claim 1, in which, in order to guarantee coupling between the at least two coil devices (13, 14) over the entire travel path, the extension of the coil device of the stationary device (13) is greater than the extension of the coil device of the mobile device (14).

8. A device in accordance with claim 1, in which, in order to guarantee coupling between the at least two coil devices (13, 14) over the entire travel path, the e&tension of the mobile coil device of the device is greater than the extension of the coil device of the stationary device.

9. A device in accordance with claim 1, in which at least one coil device (13, 14) can be constructed for any length of link by using at least one multi-core line whose cores (number n) are connected to form a coil with n windings.

10. A device in accordance with claim 1, in which the distance between the two coil devices (13, 14) increases with the magnitude of the extension of the coil devices,

particularly with the distance between the wires transverse to the direction of the longest extension of the coil.

11. A device in accordance with claim 1, in which the distance between the two coil devices (13, 14) varies within a given range along the travel path.

12. A device in accordance with claim 1, in which the coil device (14) of the mobile device (10) can be guided on a straight line along the coil device (13) of the stationary device (11), where significant deviations occur in parallel guidance in relation to the other two spatial directions.

13. A device in accordance with claim 1, in which the stationary device (11) displays a transmitter coil device (13) with at least one coil element (2) having a coil (3) and a 2-pole plug-in connector system, as well as an evaluating unit (6), which assumes different output statuses in accordance with the modulation of the transmission link (12), and a tunable series-resonant circuit, comprising capacitor (5) and transmitter coil (13) where the evaluating device (6) comprises a transponder ASIC.

14. A device in accordance with claim 1, in which the mobile device (10) displays a parallel-resonant circuit, comprising a capacitor (7), and a receiver coil device (14), as well as a damper (8), which contains a device (30) for automatic adjustment of the resonant circuit, at least one sensor evaluator (31), at least one signal generator for generating a dynamic modulation signal (32), an attenuator (34) for generating the modulation signal on the transmission link (12), an operating voltage generating

device (33) and a fastening device for mounting on a moving part.

15. A device in accordance with claim 1, in which the damper (8) in the mobile device (10) displays electronic equipment consisting exclusively of low-power components, the power requirement of which is extremely low in order to increase system reliability.

16. A device in accordance with claim 1, in which, due to a controller of damper (8) in mobile device (10), not only simple pulse strings can be transmitted to stationary device (11), but also protocols of any degree of complexity.

17. A device in accordance with claim 1, in which the sensors (9) that can be connected to mobile device (10) are designed as digital sensors like switches and/or are sensors which communicate with damper (8) via a complex protocol.

18. A device in accordance with claim 1, in which a predefined type of modulation can be used to distinguish any statuses of the sensors (9) on the mobile device(10) from malfunctions of the device (1).

19. A device in accordance with claim 1, in which a signal decoding device (21) in the evaluating device (6) of the stationary device (11) decodes a complex protocol and encompasses a data interface (23) for downstream computer systems.

20. A device in accordance with claim 1, in which a signal decoding device (21) in the evaluating device (6) of the stationary device (11) encompasses digital outputs (20) in the event of digital sensors (9) being connected in mobile device (10).